

JUICER

5    Cross-Reference to Related Application:

This application is a continuation, under 35 U.S.C. § 120, of copending international application No. PCT/EP02/09463, filed August 23, 2002, which designated the United States; this application also claims the priority, under 35 U.S.C. § 119, 10 of German patent application No. 101 42 506.6, filed August 30, 2001; the prior applications are herewith incorporated by reference in their entirety.

Background of the Invention:

15    Field of the Invention:

The invention relates to a juicer with a collecting container with a projecting element for pressing a half of a fruit containing juice and with a collecting dish for catching fruit juice running out of outlet apertures in the collection 20 container.

Such juicers for the pressing of citrus fruits are generally known. An element projecting from a collecting container, which is substantially designed as a rotation paraboloid 25 serves to catch fruit pulp and fruit juice squeezed out of the fruit. While the fruit juice runs out of outlet apertures in

the base area of the collecting container into the collecting dish, the fruit pulp remains suspended in the collecting container.

- 5 . On the other hand, a juicer driven by an electric motor is known from European patent EP 0 362 058 B1. The collecting container and the collecting dish are accommodated in a housing. A drive shaft projects through the middle of the collecting dish which sets the projecting element in  
10 rotational motion and with it the collecting container.

Summary of the Invention:

It is an object of the invention to provide a fruit juicer which overcomes the disadvantages of the heretofore-known  
15 devices and methods of this general type and the operation of which is simplified.

With the foregoing and other objects in view there is provided, in accordance with the invention, a juicer,  
20 comprising:

a housing;

a collecting container with a projecting element for pressing fruit containing fruit juice disposed in said housing; and

a collecting dish pivotally mounted in said housing for collecting the fruit juice running out of said collecting container.

- 5 In other words, the objects are achieved with a juicer of the type referred to above in that the collecting dish is mounted in a tilttable manner in a housing. By mounting the collecting dish at two points, essentially two positions are obtained which this adopts. In a first position, the collecting dish is  
10 inclined back from a pouring aperture which it possesses, as a result of which the running out of the fruit juice is prevented. In a second position, the collecting dish is inclined towards an outlet aperture, so that all the fruit juice which has collected in the collecting dish runs out of  
15 it.

If the collecting dish is tilted out of its position of equilibrium, when a level is exceeded which is dependent on the tilt angle, fruit juice flows out of the collecting dish  
20 and can be caught in a drinking container or a jug. In this way, there is no need to lift the collecting container from the collecting dish. When the collecting dish is tilted, the fruit juice can be drawn off without dripping or loss, while with the known principle of lifting off the collecting  
25 container there is the risk that drips will fall from this fruit juice and cause dirt contamination, which in most cases

are, in addition, sticky. As well as this, a correspondingly usable part of the fruit juice for drinking is lost. Thanks to the tilt solution, the invention provides assistance in this situation. The collecting container only needs to be taken out 5 of the housing for the first time when the outlet apertures are blocked with fruit pulp and the fruit juice is backing up in the collecting container.

In accordance with an added feature of the invention, the 10 juicer has on the outside of its jacket wall two opposing projections, which on their underside have an at least essentially circular rounding, located in each case in a circular mounting in the housing.

15 Particularly suitable is a juicer in which the mounts are formed as indentations of an upper edge or are formed in the vicinity of the upper edge of a jacket wall of the housing.

For preference the juicer has a pouring aperture, which is 20 arranged offset by 90° to the projections, and which project through the jacket wall of the housing. The fruit juice can be removed from the juicer in a simple manner through the aperture.

25 If the juicer is driven by a motorized drive, i.e. the element rotates and with it the collecting container, then a central

opening is provided in the base wall of the collecting container, through which a shaft journal of a drive shaft projects for driving the element.

- 5 In a further advantageous variant a handle, in the form of a grip, is arranged above the outlet aperture of the collecting dish. When the handle is pushed down or pulled upwards the collecting dish is tilted.
- 10 For preference the juicer is formed with a lip which allows for the fruit juice to be poured out easily.

In a suitable variant of the juicer the collecting dish has a tilt angle which is delimited by a collar set on the housing  
15 and pointing inwards.

In order to avoid the fruit juice overflowing from the collecting dish over the central hole in its wall surrounding the base wall, this projects higher up than the highest level  
20 of fruit juice which can be reached in it.

For preference the juicer is designed in such a way that the housing exhibits a base wall beneath the collecting dish, which delimits the tilt angle of the collecting dish  
25 downwards.

An embodiment of the juicer which is suitable for this consists of the base wall being inclined downwards to both sides from a line running through its mid-point and parallel to the tilt axis.

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- In order to be able to position the juicer securely, engagement means are provided in the housing, through which at least one first position is secured in which the collecting dish can be filled with fruit juice, and a second position can 10 be secured in which the collecting dish can be emptied through the outlet aperture. Further positions can also be determined if the collecting dish can be engaged in corresponding engagement positions in the housing.
- 15 Other features which are considered as characteristic for the invention are set forth in the appended claims.

Although the invention is illustrated and described herein as embodied in a juicer, it is nevertheless not intended to be 20 limited to the details shown, since various modifications and structural changes may be made therein without departing from the spirit of the invention and within the scope and range of equivalents of the claims.

25 The construction and method of operation of the invention, however, together with additional objects and advantages

thereof will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings.

5   Brief Description of the Drawings:

Fig. 1 is a longitudinal section of a collecting dish located in a housing for a juicer; and

Fig. 2 is a sectional view of a section taken substantially

10   perpendicularly to the section of Fig. 2, of the collecting dish according to the invention.

Description of the Preferred Embodiments:

Referring now to the figures of the drawing in detail and

15   first, particularly, to Fig. 1 thereof, there is shown a juicer 1 with a housing 2 formed substantially as a hollow cylinder. A motorized drive assembly is disposed in the housing - but the drive is not illustrated in detail for purposes of clarity. The motor drives a projecting element 20, 20   centrally arranged, which substantially has the shape of a cone or rotation paraboloid with ridges formed on its outer wall for pressing out citrus fruit and which is securely connected to a collecting container 21, known for example from the above-mentioned European patent EP 0 362 058 B1 in 25   connection with the element. The disclosure of the European patent is herewith incorporated in its entirety. The element

20 and the collecting container 21, which are only diagrammatically illustrated, are commonly driven via a drive shaft 3 by the electric motor. The fruit juice which is produced in this way drips from outlet apertures of the  
5 collecting container into a collecting dish 4, which is arranged substantially beneath the collecting container and, preferably, surrounding it laterally.

The housing 2 has in the region of its upper edge 5 two  
10 opposing recesses 6, which in each case accommodate a projection 7, which is secured on the outside of a jacket wall 8 of the collecting dish 4. The projections 7 have a substantially arc-shaped contour on their underside, with which they lie on the recesses 6. By means of the projections  
15 7 the collecting dish 4 can be pivoted about an angle  $\alpha$ . As shown, the center of gravity of the collecting dish (4) lies below the pivot axis defined by the projections 6 and the recess 7. A handle 9 is used to carry out the tilting or pivoting movement. The handle is disposed at the upper edge of  
20 the jacket wall 8 above an opening 10 of the collecting dish 4. When a user pushes the handle 9, the handle 9 is pressed downwards, so that fruit juice 11, which stands in the collecting dish 4 up to a level 12, runs out of the opening 10. In the position represented in Fig. 1 the collecting dish  
25 4 is in the position in which it can be filled with the fruit juice 11. In this situation the collecting dish 4 has a wall

13, which delimits an opening surrounding the drive shaft, of which the upper edge projects sufficiently high to prevent, in any tilt position of the collecting dish 4, the fruit juice 11 from running down over the upper edge of the wall 13.

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In the area of the opening 10 the collecting dish 4 has a lip 14, which facilitates the pouring of the fruit juice 11.

On the side opposite the opening 10 the collecting dish 4 is  
10 formed with ratchet notches 15 on the outside of its jacket wall 8. The notches 15 mesh, or interact, with counter-notches 16 on the inside of a jacket wall 17 of the housing 2 in such a way that the collecting dish 4 remains in each case in the engagement position into which it was tilted due to the  
15 actuation of the handle 9.

A collar 18 is disposed on the housing wall 17, above the collecting container and the collecting dish 4. The collar 18 prevents the collecting dish 4 from tilting upwards beyond a  
20 specified angle. The degree of tilt downwards of the collecting dish 4 is limited by a base wall 19 in the housing 2. The base wall 19 in this situation is inclined slightly downwards to both sides from a line running through its center point parallel to the tilt axis of the collecting dish 4, i.e.  
25 towards the opening 10 and to the side turned away from the

opening 10, in order to guarantee that the collecting dish 4 can be tilted.

By means of the invention a juicer 1 is provided with a  
5 tilttable or pivotable collecting dish 4, which allows for a simple and loss-free pouring of the fruit juice 11, without the element through which the citrus fruit is pressed out, and the collecting container surrounding this, from which the fruit juice drips down into the collecting dish 4, having to  
10 be removed from the housing 2. In order to tilt the collecting dish 4, two opposing projections 7 are provided on the outside of its jacket wall 8, which lie in recesses 6 on the inside of the housing wall 17 in a rotatable manner.